

ABSTRACT

A multi-mode oil base mud imager for use in non-conductive drilling fluid includes at least one current source - a current return pair, and one or more monitor electrodes not located between the current source and the current return of the current source – current return pair. Where more than one current source - current return pair is included, the tool is capable of multiple depths of investigation into surrounding formation. This data can be used as a gauge to establish the reliability of the data and to determine the resistance of the invaded zone around the borehole, as well as standoff distance of the tool from the borehole wall.